

# Research on Influencing Factors of Navigation English

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**Keywords:** AHP; Navigation English; Influencing Factors

**Abstract.** China is less competitive in the Seafarers labor market and does not sufficiently translate the comparative advantage of the labor force into comparative benefits through the direct international flow of labor force elements. The reasons for this are many factors. However, one of them is the quality of maritime education in China, including the quality of English language teaching. This paper studies the mode of Influencing Factors Of Navigation English to improve the quality of navigation English teaching.

## Introduction

With the development of social economy, the increasingly international shipping market is in urgent need of a large number of highly qualified, especially the higher level of English crew. English has become an important part of the crew's life in the sea and is a must for senior crew. The crew's ability to use professional English and professional skills together with professionalism will dominate the demand for it in the International labor market in the future. However, it has become an indisputable fact that the English level of the Chinese sea crew is not high, which restricts the competitiveness of the Chinese sea crew in the International labor market.

From the above analysis, it can be seen that China is less competitive in the Seafarers 'labor market and does not sufficiently translate the comparative advantage of the labor force into comparative benefits through the direct international flow of labor force elements. The reasons for this are many factors. However, one of them is the quality of maritime education in China, including the quality of English language teaching. According to foreign shipowners, especially some European and American shipowners, Chinese seafarers 'English ability is still somewhat different from that of sailors from countries such as the Philippines, India, Indonesia and Myanmar, which has affected the expansion of the number of Chinese seafarers sent abroad.

## Analytic Hierarchy Process

The analytic hierarchy process uses quantitative and definite analysis methods to decompose a complex problem into several influencing factors, and divides it into three levels as the target layer, the standard layer, and the indicator layer according to the corresponding relations, thus forming a multi-objective and multi-level model. It is a simple, practical and systematic method of hierarchical weight decision analysis. In recent years, the development and research of AHP have been divided into the following three aspects: First, the improvement of AHP in the traditional sense, including scale system research, sorting method research, sequence research, consistency research, and so on.

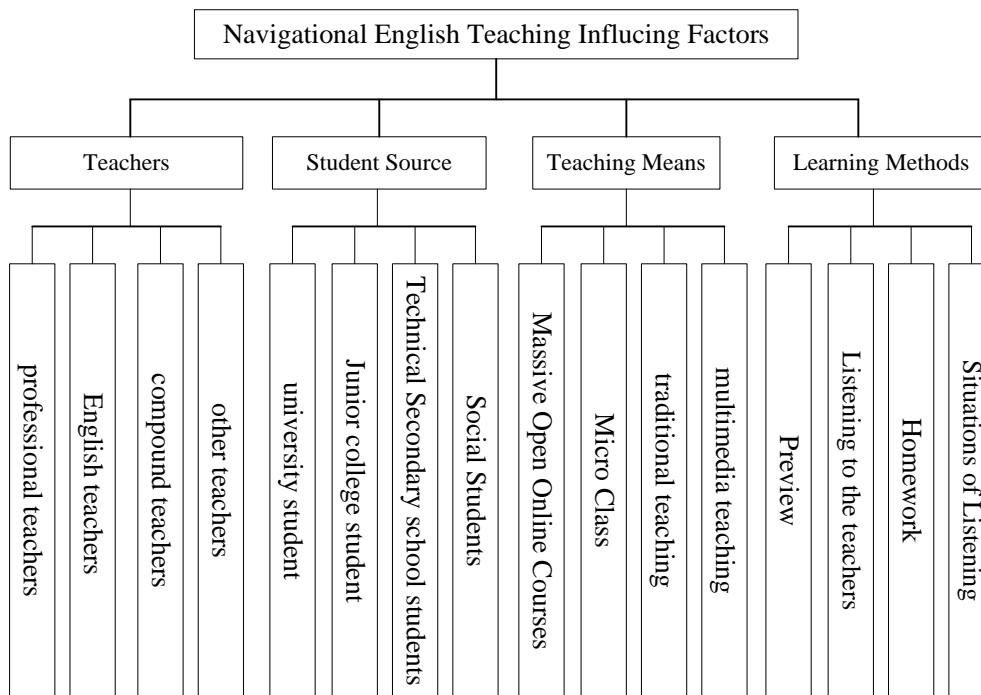


Figure 1. Influencing Factors Of Navigation English Mode

### Setup Judgment Matrices

The hierarchical structure of this paper is based on the evaluation index system of navigation english influencing factors and test the consistency, and weigh the value of each index layer as follow:

A0

$$\begin{bmatrix} 1 & 2 & 3 & 4 \\ 1/2 & 1 & 2 & 3 \\ 1/3 & 1/2 & 1 & 2 \\ 1/4 & 1/3 & 1/2 & 1 \end{bmatrix}_c$$

The contrast matrix A0 passes the consistency test, and each vector weight vector W is:

$$W = (0.4658, 0.2771, 0.1611, 0.0960)$$

$$\lambda_{\max} = 4.0310, CI = 0.0103, CR = 0.0115 < 0.1$$

A1

$$\begin{bmatrix} 1 & 3 & 1/3 & 6 \\ 1/3 & 1 & 1/4 & 3 \\ 3 & 4 & 1 & 5 \\ 1/6 & 1/3 & 1/5 & 1 \end{bmatrix}$$

The contrast matrix A0 passes the consistency test, and each vector weight vector W is:

$$W = (0.2923, 0.1336, 0.5102, 0.0640)$$

$$\lambda_{\max} = 4.2081, CI = 0.0694, CR = 0.0771 < 0.1$$

A2

$$\begin{bmatrix} 1 & 3 & 5 & 4 \\ 1/3 & 1 & 3 & 2 \\ 1/5 & 1/3 & 1 & 1/3 \\ 1/4 & 1/2 & 3 & 1 \end{bmatrix}$$

The contrast matrix A0 passes the consistency test, and each vector weight vector W is:  
 $W = (0.5359, 0.2291, 0.0775, 0.1575)$   
 $\lambda_{\max} = 4.1126, CI = 0.0375, CR = 0.0417 < 0.1$

A3

$$\begin{bmatrix} 1 & 2 & 1/3 & 1/5 \\ 1/2 & 1 & 1/3 & 1/6 \\ 3 & 3 & 1 & 1/2 \\ 5 & 6 & 2 & 1 \end{bmatrix}$$

The contrast matrix A0 passes the consistency test, and each vector weight vector W is:  
 $W = (0.1175, 0.0790, 0.2766, 0.5269)$   
 $\lambda_{\max} = 4.0492, CI = 0.0164, CR = 0.0182 < 0.1$

A4

$$\begin{bmatrix} 1 & 1/3 & 1/4 & 1/2 \\ 3 & 1 & 1/2 & 2 \\ 4 & 2 & 1 & 3 \\ 2 & 1/2 & 1/3 & 1 \end{bmatrix}$$

The contrast matrix A0 passes the consistency test, and each vector weight vector W is:

$$W = (0.0960, 0.2771, 0.4658, 0.1611)$$

$$\lambda_{\max} = 4.0310, CI = 0.0103, CR = 0.0115 < 0.1$$

From the above analysis, we can get the weight of each indicator.

## Acknowledgements

Shandong Jiaotong University teaching and research subject 2018 “Navigation English Teaching Theory and Practice Research By New-Old Power Transition” by Xiu Ping Sui

## Conclusion

The quality of seafaring English teaching is directly related to the training quality of seafaring talents. In order to meet the needs of seafaring talents training under the new forms, we should continuously explore the teaching of seafaring English and apply new teaching methods and teaching methods to airsea English teaching. Through the reasonable arrangement of the course plan of sailing English teaching, the continuous improvement of the teaching level and professional level of English teachers, the continuous improvement of teaching methods, and the continuous improvement of the evaluation and assessment system of navigation majors, the quality of navigation education and training in China will certainly be improved. It will surely play a great role in promoting the high level of seamen's navigation English and making it meet the requirements of the international market for the continuous improvement of crew quality.

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